

tion under lenses of highest magnifying power. To this end various methods of manipulation have been suggested. For some species it is desirable to mount the sporangium on the slide dry, in natural condition. This is essential in studying the *Stemonitis* species and the *Cribrarias*. Blown-out specimens are to be selected. In ordinary cases, however, we must resort to other methods, methods which will bring to all parts their natural fullness and will also render them less opaque. For these purposes, for temporary mounting, a weak solution of potassic hydrate will be found serviceable, to be followed by glycerine, if the specimen is to be kept any length of time.

But of the various matters of microscopic technique it is perhaps less needful here to speak. It is rather sought here to win for a hitherto little-noticed, but certainly remarkable group of living things a wider place in the attention and regard of students. Of course, for the proper appreciation of these things we must be children of nature, lovers of the natural world and sympathetic with all that goes on there. The consolations, the delights of nature are not for those who label things, who spend time in a vain attempt to harmonize the rules of nomenclature; her rewards are for those who love to watch the consistent harmony of her deathless cycles, and who in the secrets of her humblest forms can read the stately march of her sublime ongoing.

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EXPLANATION OF PLATE 16. — Fig. 1, *Tilmadoche viridis* (Bull.) Sacc., a single sporangium magnified $\times 25$; 1a, the same reversed; 1b, the same after spore-dispersal; 1c, Capillitium from a similar sporangium $\times 750$. Fig. 2, *Craterium minutum* (Leers) Fr., sporangia with unusually long stalks, magnified. Fig. 3, *Comatricha cespitosa* Sturgis, a cluster of sporangia $\times 4$; 3a, the capillitium highly magnified; 3b, a single spore $\times 1600$. Fig. 4, *Enteridium splendens* Morgan, æthelium (compound mass, imperfectly divided within into sporangia) natural size; 4a, a spore $\times 1400$; 4b, capillitium $\times 420$. Fig. 5, *Cribraria aurantiaca* Schrad., sporangium containing spores $\times 30$. Fig. 6, *Arcyria denudata* (Linn.) Sheld. Sporangia, two expanded, one still closed $\times 20$; 6a, a part of the capillitium $\times 750$.

A BLUE-FRUITED HUCKLEBERRY.

B. L. ROBINSON.

WHILE collecting some plants on the eastern shores of Thorndike Pond at Jaffrey, N. H., in the late summer of 1896, I noticed two varieties of fruit on the huckleberry bushes (*Gaylussacia resinosa*). The berries on some bushes were, according to the laws laid down for

them in most descriptive manuals, black and glossy, while those on neighboring bushes were pale blue and dull, being covered with a glaucous bloom, quite in the manner of the true blueberries (*Vaccinium pennsylvanicum* and *V. corymbosum*), which were growing near and permitted easy comparison. The two varieties of huckleberry were not invariably distinct, for other individuals were found with bluish-black berries of an intermediate character. Several plants of each kind were examined in much detail to discover other differences correlated with the color variation, but only two points were found, namely the size and sweetness of the fruit which were both preceptibly greater in the blue than in the black-fruited form. Some days later Mr. Walter Deane and I revisited the spot and after together verifying the previous observations, marked certain individuals to be watched during the next season.

I inquired of several country people, especially berry-pickers, whether they knew a blue-berried huckleberry. Without exception they said they did and that they regarded the blue kind better than the common black sort. Naturally I questioned them closely to be sure they were not confusing the blue huckleberry with any species of *Vaccinium*.

On returning to Cambridge, I searched for Botanical references to the blue-berried variety and found the following in Emerson's *Trees and Shrubs of Massachusetts*, p. 399 of ed. 1, regarding the species in question.

"The common variety has black shining berries and leaves green on both surfaces.

A second variety has similar leaves and berries covered with a blackish or brownish bloom.

A third variety has somewhat glaucous leaves and berries covered with a glaucous bloom.

A fourth variety has larger berries of a bluish color with a bluish bloom, and very rich to the taste."

I cannot doubt that the fourth is the variety which would properly include the blue-fruited plants on Thorndike Pond.

The following season I revisited several times the marked plants and found with interest that the blue-berried individuals were precocious in their development, being a week or two in advance of the black-berried form, both in coming into leaf and in the time of flowering. No differences of flowers or leaves were observable. One exhibiting specimens of the different forms at a meeting of the New England

Botanical Club in 1897, I learned that several members were familiar with the blue-fruited variety. Mr. J. H. Sears has since placed at my disposal a suite of specimens and notes from eastern Massachusetts. He has made out several differences between the black and the blue-fruited sorts, such as abundance of resinous excretions in the inflorescence, color of the cortex, form of corolla, etc., but with my best endeavors I have been unable to follow these distinctions when examining specimens from a wider range.

Recently Dr. Charles B. Graves of New London, Connecticut, independently discovered the blue-berried huckleberry in his region, and was about to publish upon it, but learning that I had been observing the plant he most courteously placed his material at my disposal.

Mr. Emerson's varieties have suffered the quick oblivion which is apt to overtake unnamed forms, and even our best recent floras continue to describe the fruit of *Gaylussacia resinosa* as black, without a bloom. It seems desirable therefore to place the blue-berried variety on more definite record, as follows:—

GAYLUSSACIA RESINOSA, var. **glaucocarpa**. Berries dull, blue, covered with a distinct pale sericeous bloom, and tending to be large and of rich flavor for the species: plant precocious in foliation and anthesis in comparison with the typical form.—Rocky shores of Thorndike Pond, Jaffrey, N. H., collected by the writer August 23, 1896, no. 58 (type, in herb. Gray), and subsequently in the same locality at various times by Messrs. W. Deane, E. L. Rand, and E. F. Williams.

Apparently identical plants have been found at Topsfield, Massachusetts, by Mr. J. H. Sears, who also states that its fruit is earlier and larger than in the typical form; North Berwick, Maine, by Mr. J. C. Parlin. No. 1,157b of the beautiful set of plants recently distributed from Biltmore, North Carolina, by Mr. C. D. Beadle, is (so far as the specimen in the Gray Herbarium is concerned) of this variety. Plants collected by Dr. C. B. Graves at Waterford, Conn., have smaller blue fruit and may possibly prove a different variety.

GRAY HERBARIUM.

CAREX NOVAE-ANGLIAE IN EASTERN MASSACHUSETTS—In the Gray Herbarium are two sheets of *Carex Novae-Angliae*, Schw., collected by William Boott, one of which is labelled, "Purgatory Swamp, Dedham, July 10, 1861," and the other "Blue Hills, June 3, 1870."